

AMENDMENTS TO THE CLAIMS:

Pursuant to the revised 37 C.F.R. § 1.121, the following listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-183. (Canceled)

184. (New) An isolated or recombinant polypeptide, wherein the polypeptide induces proliferation of T cells in the presence of a p35 polypeptide subunit of human interleukin-12, and wherein the polypeptide comprises a sequence that is at least 95% identical to the mature domain of SEQ ID NO:8.

185. (New) The isolated or recombinant polypeptide of claim 184, wherein the mature domain comprises amino acid residues 23-324 of SEQ ID NO:8.

186. (New) The isolated or recombinant polypeptide of claim 184, wherein the polypeptide comprises a sequence that is at least 97% identical to the mature domain of SEQ ID NO:8.

187. (New) The isolated or recombinant polypeptide of claim 186, wherein the polypeptide comprises the mature domain of SEQ ID NO:8.

188. (New) An isolated or recombinant polypeptide, wherein the polypeptide induces proliferation of T cells in the presence of a p35 polypeptide subunit of human interleukin-12, and wherein the polypeptide comprises a sequence that is at least 95% identical to the sequence of SEQ ID NO:8.

189. (New) The isolated or recombinant polypeptide of claim 188, wherein the polypeptide comprises a sequence that is at least 97% identical to the sequence of SEQ ID NO:8.

190. (New) The isolated or recombinant polypeptide of claim 189, wherein the polypeptide comprises the sequence of SEQ ID NO:8.

191. (New) An isolated or recombinant polypeptide which induces proliferation of T cells in the presence of a p35 polypeptide subunit of human interleukin-12, said isolated or recombinant polypeptide comprising a polypeptide sequence (amino acid residue positions 23-238 of SEQ ID NO:39): IWEL-X₂₇-K-X₂₉-VYVVELDWYP-X₄₀-APGE-X₄₅-VVL-X₄₉-CDTPEEDGITWT-X₆₂-DQSS-X₆₇-VLG-X₇₁-GKTLTI-X₇₈-VKEFGDAGQYTC-X₉₁-KGG-X₉₅-X₉₆-LS-X₉₉-SLLLLHKKEDGIWSTDILKDQK-X₁₂₂-PK-X₁₂₅-K-X₁₂₇-FL-X₁₃₀-CEAK-X₁₃₅-YSG-X₁₃₉-FTCWWT-X₁₄₇-ISTDL-X₁₅₃-F-X₁₅₅-VKSSRGS-X₁₆₃-DP-X₁₆₆-GVTCG-X₁₇₂-X₁₇₃-X₁₇₄-LS-X₁₇₇-X₁₇₈-X₁₇₉-X₁₈₀-X₁₈₁-X₁₈₂-X₁₈₃-X₁₈₄-X₁₈₅-X₁₈₆-X₁₈₇-X₁₈₈-Y-X₁₉₀-VECQE-X₁₉₆-SACP-X₂₀₁-AEESLPIEV-X₂₁₁-X₂₁₂-X₂₁₃-A-X₂₁₅-HKLKYENYTS-X₂₂₆-FFIRDIKPDPPKNLQL-X₂₄₄-PLKNSR-X₂₅₁-VE-X₂₅₄-X₂₅₅-W-X₂₅₇-YPDTWS-X₂₆₄-PHSYFSLTF-X₂₇₄-X₂₇₅-QVQG-X₂₈₀-X₂₈₁-KRE-X₂₈₅-X₂₈₆-X₂₈₇-X₂₈₈-X₂₈₉-F-X₂₉₁-D-X₂₉₃-TSA-X₂₉₇-V-X₂₉₉-C-X₃₀₁-K-X₃₀₃-A-X₃₀₅-I-X₃₀₇-V-X₃₀₉-A-X₃₁₁-DRY-X₃₁₅-SS-X₃₁₈-WS-X₃₂₁-WASV-X₃₂₆-X₃₂₇-X₃₂₈, or a conservatively substituted variation thereof,

where X₂₇ is K or E; X₂₉ is D or N; X₄₀ is D or N; X₄₅ is M or T; X₄₉ is T or A; X₆₂ is S; X₆₇ is E or G; X₇₁ is T; X₇₈ is H; X₉₁ is H or R; X₉₅ is E, A, K, or T; X₉₆ is V or A; X₉₉ is R or Q; X₁₂₂ is E or K; X₁₂₅ is N or A; X₁₂₇ is S or I; X₁₃₀ is K; X₁₃₅ is N or D; X₁₃₉ is R or H; X₁₄₇ is T or A; X₁₅₃ is T or K; X₁₅₅ is S or T; X₁₆₃ is S or T; X₁₆₆ is Q, R, or H; X₁₇₂ is A or T; X₁₇₃ is A or V; X₁₇₄ is T or L; X₁₇₇ is A or E; X₁₇₈ is E or D; X₁₇₉ is R, L, or K; X₁₈₀ is V or G; X₁₈₁ to X₁₈₄ inclusive is deleted, or is replaced with the sequence S-(L or M)-(E or D)-H-R; X₁₈₅ is E; X₁₈₆ is Y; X₁₈₇ is K or N; X₁₈₈ is K; X₁₉₀ is R or T; X₁₉₆ is G; X₂₀₁ is A or S; X₂₁₁ is V; X₂₁₂ is V or L; X₂₁₃ is D or E; X₂₁₅ is V or I; X₂₂₆ is S or R; X₂₄₄ is K or R; X₂₅₁ is Q or H; X₂₅₄ is V or I; X₂₅₅ is S or N; X₂₅₇ is E or G; X₂₆₄ is T or A; X₂₇₄ is C or G; X₂₇₅ is V or I; X₂₈₀ is K or R; X₂₈₁ is S or N;

X₂₈₅ is K or D; X₂₈₆ is K or R; X₂₈₇ is D or is deleted; X₂₈₈ is R or is deleted; X₂₈₉ is I or L; X₂₉₁ is T or M; X₂₉₃ is K or Q; X₂₉₇ is T or K; X₂₉₉ is I, T, or V; X₃₀₁ is R or H; X₃₀₃ is N or D; X₃₀₅ is K; X₃₀₇ is R; X₃₀₉ is Q; X₃₁₁ is R; X₃₁₅ is Y or H; X₃₁₈ is S or F; X₃₂₁ is E or D; X₃₂₆ is P or S; X₃₂₇ is C or L; and X₃₂₈ is S, G, or Q.

192. (New) An isolated or recombinant polypeptide which induces proliferation of T cells in the presence of a p35 polypeptide subunit of human interleukin-12, wherein the polypeptide comprises a sequence which differs from the mature domain of p40 polypeptide subunit of human interleukin-12 set forth in SEQ ID NO:15 in 1 to 18 amino acid positions and which comprises the substitution Ser305Lys relative to SEQ ID NO:15.

193. (New) The isolated or recombinant polypeptide of claim 192, wherein the polypeptide further comprises a deletion of amino acid residues Arg181 to Asn184 inclusive relative to SEQ ID NO:15.

194. (New) The isolated or recombinant polypeptide of claim 192, wherein the polypeptide further comprises at least one substitution relative to SEQ ID NO:15 selected from the group of Leu62Ser, Ser71Thr, Gln78His, His99(Arg or Gln), Thr127(Ser or Ile), Arg130Lys, Lys185Glu, Glu186Tyr, Tyr187(Lys or Asn), Glu188Lys, Ser190(Arg or Thr), Asp196Gly, Met211Val, Val289(Ile or Leu), Ser305Lys, Ser307Arg, Arg309Gln, and Gln311Arg.

195. (New) The isolated or recombinant polypeptide of claim 193, wherein the polypeptide further comprises at least one substitution relative to SEQ ID NO:15 selected from the group of Leu62Ser, Ser71Thr, Gln78His, His99(Arg or Gln), Thr127(Ser or Ile), Arg130Lys, Lys185Glu, Glu186Tyr, Tyr187(Lys or Asn), Glu188Lys, Ser190(Arg or Thr), Asp196Gly, Met211Val, Val289(Ile or Leu), Ser305Lys, Ser307Arg, Arg309Gln, and Gln311Arg.

196. (New) The isolated or recombinant polypeptide of claim 194, wherein the polypeptide further comprises the following substitutions relative to SEQ ID NO:15: Lys185Glu, Glu186Tyr, Tyr187(Lys or Asn), Glu188Lys, Ser190(Arg or Thr).

197. (New) The isolated or recombinant polypeptide of claim 195, wherein the polypeptide further comprises the following substitutions relative to SEQ ID NO:15: Lys185Glu, Glu186Tyr, Tyr187(Lys or Asn), Glu188Lys, Ser190(Arg or Thr).

198. (New) The isolated or recombinant polypeptide of claim 192, wherein the polypeptide further comprises substitutions His99Arg and Val289Ile relative to SEQ ID NO:15.

199. (New) The isolated or recombinant polypeptide of claim 193 wherein the polypeptide further comprises substitutions His99Arg and Val289Ile relative to SEQ ID NO:15.

200. (New) The isolated or recombinant polypeptide of claim 192, wherein the polypeptide further comprises at least one substitution relative to SEQ ID NO:15 selected from the group of Met45Thr, Val96Ala, Glu257Gly, Val275Ile, and Ser318Phe.

201. (New) A composition comprising the polypeptide of claim 184 and a carrier.

202. (New) A composition comprising the polypeptide of claim 191 and a carrier.

203. (New) A composition comprising the polypeptide of claim 193 and a carrier.

204. (New) The composition of claim 201, further comprising a p35 polypeptide subunit of human interleukin-12.

205. (New) The composition of claim 202, further comprising a p35 polypeptide subunit of human interleukin-12.

206. (New) The composition of claim 203, further comprising a p35 polypeptide subunit of human interleukin-12.

207. (New) The composition of claim 201, wherein the carrier is a pharmaceutically acceptable carrier.

208. (New) The isolated or recombinant polypeptide of claim 184, wherein the polypeptide induces a 4-fold increase in the proliferation of T cells in the presence of the p35 polypeptide subunit of human interleukin-12 compared to the proliferation of T cells induced by a p40 polypeptide subunit of human interleukin-12 in the presence of the p35 polypeptide subunit of human interleukin-12.